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STAFFORD, PATRICK	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/526,574	Applicant(s) ALTMANN, KONRAD	
	Examiner Patrick Stafford	Art Unit 2828	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 March 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *37-74* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *37-74* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/31/2005*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claims 1-36 are cancelled.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 37-38, 40-44, 56-58, 60, 62-66, 72-73 are rejected under 35 U.S.C. 102(b) as being anticipated by Brauch et al (U.S. Patent 5,553,088, hereafter '088).

Claim 37: '088 teaches a solid-state laser or laser amplifier comprising:

a laser gain material for emitting a laser beam along an axis (col. 14, lines 58-63 and Fig. 21, part 12),

at least one pump light source for pumping the laser gain material with a pump beam that enters the laser gain material through an entry surface area along an axis at least approximately perpendicular to the axis of the laser beam (col. 17, lines 1-24 and Fig. 21, part 192), and

optical elements for focusing the pump beam in said laser material (col. 14, lines 42-50 and Fig. 21, parts 196, 200, 202, 126 and 26),

wherein the laser gain material has an entry surface area and at least one interface opposite the entry surface area, said interface being configured such that said pump beam is reflected by said interface to again pass through said laser gain material (col. 14, lines 50-57 and Fig. 21, part 202).

Claim 38: ‘088 teaches the solid-state laser as set forth in claim 37, comprising a reflector which receives said pump beam after reflection by said interface and directs said pump beam back into said laser gain material for a further time (col. 14, lines 50-57 and Fig. 21, part 200).

Claim 40: ‘088 teaches the solid-state laser as set forth in claim 38, wherein the optical elements and the reflector create respective images that overlap partly or fully (col. 14, lines 42-63 and Fig. 21, parts 194, 198 and 24a and 24b).

Claim 41: ‘088 teaches the solid-state laser as set forth in claim 37, wherein said surface area through which said pump beam enters said laser gain material is flat (col. 14, lines 58-63 and Fig. 21, part 12).

Claim 42: ‘088 teaches the solid-state laser as set forth in claim 41, wherein said interface at which said pump beam is reflected is flat (col. 14, lines 50-57 and Fig. 21, part 202).

Claim 43: ‘088 teaches the solid-state laser as set forth in claim 42, wherein the axis of the laser beam is substantially parallel to said surface area and said interface (col. 14, lines 42-63 and Fig. 21, part 198).

Claim 44: ‘088 teaches the solid-state laser as set forth in claim 37, wherein said interface at which said pump beam is reflected is flat (col. 14, lines 50-57 and Fig. 21, part 202).

Claim 56: ‘088 teaches the solid-state laser as set forth in claim 37, characterized in that some or all of said technical elements defined in the preceding claims for imaging, redirecting, reflecting or polarizing said pump beams also find application for said beams coming from the other side(s) (col. 14, lines 42-50 and Fig. 21, parts 196, 200, 202, 126 and 26).

Claim 57: ‘088 teaches the solid-state laser as set forth in claim 38, wherein the optical elements create an image in a first region of the laser gain material (col. 14, lines 42-47 and Fig. 21, part

194, first focus spot), the reflector creates an image in a second region of the laser gain material (col. 14, lines 42-57 and Fig. 21, part 198, second spot), and the laser comprises a further reflector that receives pump light reflected by the reflector, from the second region, and directs the received pump light to said first region (col. 14, lines 42-57 and Fig. 21, part 32).

Claim 58: '088 teaches the solid-state laser as set forth in claim 57, comprising a diversion reflector that receives pump light that has passed through said second region (col. 12, lines 53-63 and Fig. 21, part 126) and directs the received pump light into a third adjacent region, and so on, to then be directed from said last region passed through in the reverse sequence through said regions as passed through prior (col. 12, lines 53-63).

Claim 60: A solid-state laser or laser amplifier comprising:

a laser material having an entry surface area (col. 14, lines 58-63 and Fig. 21, part 12) and at least one interface opposite the entry surface area (col. 14, lines 50-57 and Fig. 21, part 202),

at least one pump light source for pumping the laser material with a pump beam through said entry surface area along an axis at least approximately perpendicularly to the axis of a laser beam substantially absorbed in the laser material (col. 17, lines 1-24 and Fig. 21, part 192),

optical elements for focusing the pump beam in said laser material (col. 14, lines 42-50 and Fig. 21, parts 196, 200, 202, 126 and 26), and

an external reflector following said opposite interface for receiving said pump beam and reflecting said pump beam back into said laser material, whereby the pump beam again passes through the laser material (col. 14, lines 50-57 and Fig. 21, part 200).

Claim 62: '088 teaches the solid-state laser as set forth in claim 60, wherein the optical elements and the reflector create respective images that overlap partly or fully (col. 14, lines 42-63 and Fig. 21, parts 194, 198 and 24a and 24b).

Claim 63: '088 teaches the solid-state laser as set forth in claim 60, wherein said surface area through which said pump beam enters said laser gain material is flat (col. 14, lines 58-63 and Fig. 21, part 12).

Claim 64: '088 teaches the solid-state laser as set forth in claim 63, wherein said interface at which said pump beam is reflected is flat (col. 14, lines 50-57 and Fig. 21, part 202).

Claim 65: '088 teaches the solid-state laser as set forth in claim 64, wherein the axis of the laser beam is substantially parallel to said surface area and said interface (col. 14, lines 42-63 and Fig. 21, part 198).

Claim 66: '088 teaches the solid-state laser as set forth in claim 60, wherein said interface is flat (col. 14, lines 50-57 and Fig. 21, part 202).

Claim 72: '088 teaches the solid-state laser as set forth in claim 60, wherein the optical elements create an image in a first region of the laser gain material (col. 14, lines 42-47 and Fig. 21, part 194, first focus spot), the reflector creates an image in a second region of the laser gain material (col. 14, lines 42-57 and Fig. 21, part 198, second spot), and the laser comprises a further reflector that receives pump light reflected by the reflector, from the second region, and directs the received pump light to said first region (col. 14, lines 42-57 and Fig. 21, part 32).

Claim 73: '088 teaches the solid-state laser as set forth in claim 72, comprising a diversion reflector that receives pump light that has passed through said second region (col. 12, lines 53-63 and Fig. 21, part 126) and directs the received pump light into a third adjacent region, and so on,

to then be directed from said last region passed through in the reverse sequence through said regions as passed through prior (col. 12, lines 53-63).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 39, 45-46, 49-54, 59, 61, 67-71 and 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brauch et al (U.S. Patent 5,553,088, hereafter '088) in view of Selker et al (U.S. Patent 5,485,482, hereafter '482).

Claim 39: '088 teaches the solid-state laser as set forth in claim 38. It does not explicitly teach the reflector is a cylindrical mirror. However, '482 teaches the use of a cylindrical reflector in a solid-state laser system (col. 6, lines 60-65 and Fig. 4, part 40) in order to collimate and focus light on a laser crystal. Therefore, it would have been obvious to one of ordinary skill in that art at the time the invention was made to use a cylindrical reflector in a solid-state laser system in order to collimate and focus light on a laser crystal.

Claim 45: '088 teaches the solid-state laser as set forth in claim 37, wherein the laser further comprises a reflector that receives said pump beam after reflection by said interface and directs said pump beam back into said laser gain material for a further time (col. 14, lines 50-57 and Fig. 21, part 200). It does not explicitly teach a pump beam polarized in a first polarization

state and an optical element that is interposed between the laser gain material and the reflector and through which said pump beam passes when passing to and from the reflector and which alters the state of polarization of the pump beam to a second polarization state. However, '482 teaches a solid-state laser with a pump beam polarized in a first polarization state and an optical element that is interposed between the laser gain material (Fig. 3, part 12) and the reflector (Fig. 3, part 12 "reflective coating") and through which said pump beam passes when passing to and from the reflector and which alters the state of polarization of the pump beam to a second polarization state (col. 6, lines 23-33 and Fig. 10) in order to achieve high absorption of the pump light. Therefore, it would have been obvious to one of ordinary skill in that art at the time the invention was made to use a pump beam polarized in a first polarization state and an optical element that is interposed between the laser gain material and the reflector and through which said pump beam passes when passing to and from the reflector and which alters the state of polarization of the pump beam to a second polarization state in order to achieve high absorption of the pump light.

Claim 46: '088 and '482 teach the solid-state laser as set forth in claim 45. '482 teaches the pump beam is linearly polarized (col. 6, lines 23-33) and the optical element interposed between said laser gain material and said reflector is a lambda quarter plate (col. 5, lines 14-17).

Claim 49: '088 teaches the solid state laser solid-state laser as set forth in claim 37, comprising a linear pump light source arranged perpendicularly to their linear extent and juxtaposed laterally (col. 17, lines 1-24 and Fig. 21, part 192), and wherein the pump light source emit pump beams that impinge on said laser gain material at diverse angles of incidence (Fig. 21, parts 32 and 194). It does not explicitly teach the use of a plurality of linear pump light sources. However, '482

teaches a solid state laser system with a plurality of linear pump light sources (col. 6, lines 60-65 and Fig. 4, parts 2a, 2b, 2c, 2d) in order to create multiple pump beams impinged on the gain material. Therefore, it would have been obvious to one of ordinary skill in that art at the time the invention was made to use a solid state laser system with a plurality of linear pump light sources arranged perpendicularly to their linear extent and juxtaposed laterally in order to create multiple pump beams impinged on the gain material.

Claim 50: '088 teaches the solid state laser solid-state laser as set forth in claim 37. It does not explicitly teach a plurality of linear pump light sources arranged in line parallel to their linear extent for the purpose of pumping a stripe region of the laser gain material, said stripe region being of a length that is a multiple of the length of said individual pump light sources. However, '482 teaches a solid state laser system with a plurality of linear pump light sources arranged in line parallel to their linear extent (col. 6, lines 60-65 and Fig. 4, parts 2a, 2b, 2c, 2d) for the purpose of pumping a stripe region of the laser gain material (col. 6, lines 60-65 and Fig. 4, part 12), said stripe region inherently being of a length that is a multiple of the length of said individual pump light sources in order to create multiple pump beams impinged on the gain material. Therefore, it would have been obvious to one of ordinary skill in that art at the time the invention was made to use a solid state laser system with a plurality of linear pump light sources arranged in line parallel to their linear extent for the purpose of pumping a stripe region of the laser gain material, said stripe region inherently being of a length that is a multiple of the length of said individual pump light sources in order to create multiple pump beams impinged on the gain material.

Claim 51: ‘088 and ‘482 teach the solid-state laser as set forth in claim 50. ‘482 teaches the plurality of pump light sources are separated from each other (Fig. 2a, parts 2a and 2b).

Claim 52: ‘088 and ‘482 teach the solid-state laser as set forth in claim 50. ‘482 teaches the plurality of pump light sources are arranged in groups (col. 6, lines 60-65 and Fig. 4, parts 2a, 2b, 2c, 2d).

Claim 53: ‘088 and ‘482 teach the solid-state laser as set forth in claim 50. ‘482 teaches the stripe region is composed of discrete segments (col. 7, lines 48-57 and Fig. 8, part 54).

Claim 54: ‘088 teaches the solid-state laser as set forth in claim 37, comprising at least two temperature controlling elements (Fig. 25, parts 206) of high thermal conductivity for cooling the laser gain material (col. 16, lines 1-8), the temperature controlling elements being separated from each other by a gap that allows the pump light to enter the laser gain material (Fig. 25, parts 206). It does not explicitly teach the use of heat sinks to cool the laser gain medium. However, ‘482 teaches the use of heat sinks (4, lines 58-64) to cool laser element and in order to dissipate heat. Therefore, it would have been obvious to one of ordinary skill in that art at the time the invention was made to use heat sinks to cool the laser gain medium and dissipate heat in the laser medium.

Claim 59: ‘088 teaches the solid-state laser as set forth in claim 57. It does not explicitly teach a second pump light source that emits a second pump beam that passes through the second region, and a diversion reflector that receives the second pump beam from the second region and directs the second pump beam to the first region. However, ‘482 teaches a second pump light source (col. 6, lines 60-65 and Fig. 4, parts 2a, 2b, 2c, 2d) that emits a second pump beam that passes through the second region (Fig. 4, parts 6a, 6b, 6c, 6d), and a diversion reflector that receives the

second pump beam from the second region and directs the second pump beam to the first region (col. 3, lines 61-65) in order to create multiple pump beams impinged on the gain material. Therefore, it would have been obvious to one of ordinary skill in that art at the time the invention was made to use a second pump light source that emits a second pump beam that passes through the second region, and a diversion reflector that receives the second pump beam from the second region and directs the second pump beam to the first region in order to create multiple pump beams impinged on the gain material.

Claim 61: '088 teaches the solid-state laser as set forth in claim 60. It does not explicitly teach the reflector is a cylindrical mirror. However, '482 teaches the use of a cylindrical reflector in a solid-state laser system (col. 6, lines 60-65 and Fig. 4, part 40) in order to collimate and focus light on a laser crystal. Therefore, it would have been obvious to one of ordinary skill in that art at the time the invention was made to use a cylindrical reflector in a solid-state laser system in order to collimate and focus light on a laser crystal.

Claim 67: '088 teaches the solid state laser solid-state laser as set forth in claim 60, comprising a linear pump light source arranged perpendicularly to their linear extent and juxtaposed laterally (col. 17, lines 1-24 and Fig. 21, part 192), and wherein the pump light source emit pump beams that impinge on said laser gain material at diverse angles of incidence (Fig. 21, parts 32 and 194). It does not explicitly teach the use of a plurality of linear pump light sources. However, '482 teaches a solid state laser system with a plurality of linear pump light sources (col. 6, lines 60-65 and Fig. 4, parts 2a, 2b, 2c, 2d) in order to create multiple pump beams impinged on the gain material. Therefore, it would have been obvious to one of ordinary skill in that art at the time the invention was made to use a solid state laser system with a plurality of linear pump light sources

arranged perpendicularly to their linear extent and juxtaposed laterally in order to create multiple pump beams impinged on the gain material.

Claim 68: '088 teaches the solid state laser solid-state laser as set forth in claim 60. It does not explicitly teach a plurality of linear pump light sources arranged in line parallel to their linear extent for the purpose of pumping a stripe region of the laser gain material, said stripe region being of a length that is a multiple of the length of said individual pump light sources. However, '482 teaches a solid state laser system with a plurality of linear pump light sources arranged in line parallel to their linear extent (col. 6, lines 60-65 and Fig. 4, parts 2a, 2b, 2c, 2d) for the purpose of pumping a stripe region of the laser gain material (col. 6, lines 60-65 and Fig. 4, part 12), said stripe region inherently being of a length that is a multiple of the length of said individual pump light sources in order to create multiple pump beams impinged on the gain material. Therefore, it would have been obvious to one of ordinary skill in that art at the time the invention was made to use a solid state laser system with a plurality of linear pump light sources arranged in line parallel to their linear extent for the purpose of pumping a stripe region of the laser gain material, said stripe region inherently being of a length that is a multiple of the length of said individual pump light sources in order to create multiple pump beams impinged on the gain material.

Claim 69: '088 and '482 teach the solid-state laser as set forth in claim 68. '482 teaches the plurality of pump light sources are separated from each other (Fig. 2a, parts 2a and 2b).

Claim 70: '088 and '482 teach the solid-state laser as set forth in claim 68. '482 teaches the plurality of pump light sources are arranged in groups (col. 6, lines 60-65 and Fig. 4, parts 2a, 2b, 2c, 2d).

Claim 71: '088 teaches the solid-state laser as set forth in claim 60, comprising at least two temperature controlling elements (Fig. 25, parts 206) of high thermal conductivity for cooling the laser gain material (col. 16, lines 1-8), the temperature controlling elements being separated from each other by a gap that allows the pump light to enter the laser gain material (Fig. 25, parts 206). It does not explicitly teach the use of heat sinks to cool the laser gain medium. However, '482 teaches the use of heat sinks (4, lines 58-64) to cool laser element and in order to dissipate heat. Therefore, it would have been obvious to one of ordinary skill in that art at the time the invention was made to use heat sinks to cool the laser gain medium and dissipate heat in the laser medium.

Claim 74: '088 teaches the solid-state laser as set forth in claim 72. It does not explicitly teach a second pump light source that emits a second pump beam that passes through the second region, and a diversion reflector that receives the second pump beam from the second region and directs the second pump beam to the first region. However, '482 teaches a second pump light source (col. 6, lines 60-65 and Fig. 4, parts 2a, 2b, 2c, 2d) that emits a second pump beam that passes through the second region (Fig. 4, parts 6a, 6b, 6c, 6d), and a diversion reflector that receives the second pump beam from the second region and directs the second pump beam to the first region (col. 3, lines 61-65) in order to create multiple pump beams impinged on the gain material. Therefore, it would have been obvious to one of ordinary skill in that art at the time the invention was made to use a second pump light source that emits a second pump beam that passes through the second region, and a diversion reflector that receives the second pump beam from the second region and directs the second pump beam to the first region in order to create multiple pump beams impinged on the gain material.

Claims 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brauch et al (U.S. Patent 5,553,088, hereafter '088) in view of Selker et al (U.S. Patent 5,485,482, hereafter '482) and further in view of Kan et al (U.S. Patent 5,872,804, hereafter '804).

Claim 47: '088 and '482 teach the solid-state laser as set forth in claim 45. They do not explicitly teach a separating element located between the pump light source and the optical element that alters the polarization state of the pump light, wherein said separating element receives both pump light in the first polarization state and pump light in the second polarization state and directs the pump light in the first polarization state to the laser gain material and directs the pump light in the second polarization state to a reflector that reflects the pump light in the second polarization state to the laser gain material. However, '804 teaches a solid state laser system with a separating element (col. 5, lines 57-61 and Fig. 1, part 5) located between the pump light source (col. 5, lines 46-55 and Fig. 1, part 9) and the optical element that alters the polarization state of the pump light (col. 5, lines 57-61 and Fig. 1, part 20), wherein said separating element receives both pump light in the first polarization state and pump light in the second polarization state and directs the pump light in the first polarization state to the laser gain material and directs the pump light in the second polarization state to a reflector that reflects the pump light in the second polarization state to the laser gain material (col. 5, line 62-col. 6, line 4) in order to output pulsed laser light. Therefore, it would have been obvious to one of ordinary skill in that art at the time the invention was made to use a separating element located between the pump light source and the optical element that alters the polarization state of the pump light, wherein said separating element receives both pump light in the first polarization state and pump

light in the second polarization state and directs the pump light in the first polarization state to the laser gain material and directs the pump light in the second polarization state to a reflector that reflects the pump light in the second polarization state to the laser gain material in order to output pulsed laser light.

Claim 48: '088, '482 and '804 teach the solid-state laser as set forth in claim 47. '804 teaches the separating element is a polarization beam splitter (col. 5, lines 57-61 and Fig. 1, part 5).

Claim 55 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brauch et al (U.S. Patent 5,553,088, hereafter '088) in view of Selker et al (U.S. Patent 5,485,482, hereafter '482) and further in view of Bull et al (U.S. Patent 6,075,803, hereafter '803).

Claim 55: '088 teaches the solid-state laser as set forth in claim 37. '088 teaches the laser further comprises optical elements for imaging the pump light sources into the laser gain material, and the interfaces are configured to reflect the pump beams that enter the gain material through the respective entry surface areas to again pass through the laser gain material (col. 14, lines 50-57 and Fig. 21, part 200). It does not explicitly teach the laser gain material is configured as a rod with at least two main surfaces each having an entry surface area, the rod has interfaces opposite the entry surface areas respectively, the laser comprises at least two pump light sources for pumping the laser gain material with respective pump light beams that enter the rod through said entry surfaces respectively. However, '803 teaches a solid state laser system with a laser gain material configured as a rod (col. 3, lines 35-40 and Fig. 1, part 12) with at least two main surfaces each having an entry surface area (col. 3, lines 49-54 and Fig. 1, parts 18 and 20), the rod has interfaces opposite the entry surface areas respectively (col. 3, lines 49-54 and

Fig. 1, parts 18 and 20), the laser comprises at least two pump light sources for pumping the laser gain material with respective pump light beams that enter the rod through said entry surfaces respectively (col. 4, lines 35-44) in order to generate high power pumping. Therefore, it would have been obvious to one of ordinary skill in that art at the time the invention was made to use a solid state laser system with a laser gain material configured as a rod with at least two main surfaces each having an entry surface area, the rod has interfaces opposite the entry surface areas respectively, the laser comprises at least two pump light sources for pumping the laser gain material with respective pump light beams that enter the rod through said entry surfaces respectively in order to generate high power pumping.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Stafford whose telephone number is (571) 270-1275. The examiner can normally be reached on M-Th 7:30-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MinSun Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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PRIMARY EXAMINER